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Subject: Re: error using statement: If.....then

Posted by [Michael Galloy](#) on Tue, 26 Jun 2007 21:30:29 GMT

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On Jun 26, 2:55 pm, Giuseppe Giovanni Salerno <g...@cam.ac.uk> wrote:

> Hi everybody, I am new on IDL and I will be very grateful if someone  
> could help me  
>  
> I have an array of value (X,Y) and I want all Y data negative equals  
> to 1:  
> x y  
> 1 84  
> 2 90  
> 3 14  
> 4 -75  
> 5 -95  
> 6 -27  
>  
> so I guess the correct way to apply this filtering is working with IF  
> and THEN:  
>  
> IF x LT 0 then x = 1  
>  
> but I got an error:  
> "Expression must be a scalar or 1 element array in this context: <BYTE  
> Array[2, 6]"  
> How I can resolve this problem?  
>  
> Thanks in advance  
> Cico

A couple points:

1. Array indices start at 0 in IDL, so the x column in your table of values should be 0..5.
2. The technique you are trying above (i.e. with an IF statement) also needs a FOR loop, to loop over each individual element. This is not the best technique for IDL.
3. Use the WHERE statement to do things like the above. How about:

```
negIndices = where(x lt 0, nNegative)
if (nNegative gt 0) then x[negIndices] = 1
```

This could be done like:

```
x[where(x lt 0)] = 1
```

if you know that there will always be some negative values in x. (But I would always check.)

Mike

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[www.michaelgalloy.com](http://www.michaelgalloy.com)

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Subject: Re: error using statement: If.....then  
Posted by [Mariolncandenza](#) on Wed, 27 Jun 2007 00:50:20 GMT  
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>> IF x LT 0 then x = 1

IDL also provides many good ways to do this logical operation without loops or explicit IF/THEN, such as:

```
x = ( x > 0 ) + ( x lt 0 );  
x = ( x*(x ge 0) ) + ( x lt 0 );  
x = ( x > 1 ) - ( x eq 0 );
```

, all of which accomplish what you're trying to do here.

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Subject: Re: error using statement: If.....then  
Posted by [David Fanning](#) on Wed, 27 Jun 2007 03:27:50 GMT  
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Ed Hyer writes:

> IDL also provides many good ways to do this logical operation without  
> loops or explicit IF/THEN, such as:

>

```
> x = ( x > 0 ) + ( x lt 0 );  
> x = ( x*(x ge 0) ) + ( x lt 0 );  
> x = ( x > 1 ) - ( x eq 0 );
```

>

> , all of which accomplish what you're trying to do here.

I wonder if the error in your previous article couldn't be caused by obfuscated code. :-)

Cheers,

David

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David Fanning, Ph.D.  
Fanning Software Consulting, Inc.  
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>  
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

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